Independent Committee in relation to the Fire at Wang Fuk Court in Tai Po

Witness Statement of Ir Dr. TO Chi-wing

I, TO Chi-wing, of New Territories South Command, Fire Services Department, Airport South Fire Station, 23 South Runway Road, Hong Kong International Airport, Lantau Island do say as follows:-

1. I am the Divisional Commander (Airport) of the Fire Services Department ("**FSD**") of the Government of the Hong Kong Special Administrative Region. I have joined the FSD for 19 years since 2006 and was promoted to the present rank on 31 December 2024. My main responsibilities include commanding firefighting and rescue operations during serious incidents at the Hong Kong International Airport, as well as overseeing the Division's administration.

2. I hold a Bachelor of Science in Physics, graduating with First Class Honours, and a Master of Philosophy in Physics from the Chinese University of Hong Kong. After joining the FSD, I further obtained a Bachelor of Engineering in Fire Engineering from the University of Central Lancashire, as well as a Master of Science in Fire and Safety Engineering and a Doctor of Philosophy in Building Services Engineering from the Hong Kong Polytechnic University, I was registered as a Corporate Member of the Hong Kong Institution of Engineers (Fire Division) in 2016 and have held professional engineering recognition in Hong Kong ever since.

3. I have taken part in post-fire investigations for several major incidents, including the fatal No. 3 Alarm Fire at 111 Ma Tau Wai Road in 2011 and the No. 4 Alarm Fire at the Amoycan Industrial Centre in 2016.

4. As the Secretary of the Inter-departmental Fire Investigation Task Force ("**IFITF**"), my responsibilities include:

i. facilitating the progress of fire investigation;
ii. liaising with different B/Ds on meetings and inspections;
iii. making necessary arrangement for relevant full scale burning tests & computational modelling; and
iv. compiling the written report on behalf of IFITF.

5. I make this Witness Statement pursuant to the request of the Independent Committee ("**Committee**") in relation to the fire at Wang Fuk Court in Tai Po as set out in a letter from Messrs. Lo & Lo, Solicitors for the Committee, to the FSD dated 23 December 2025 ("**23 December Letter**") in which specific questions were raised in paragraphs 2 to 3, 5 to 9, and 12 to 20 ("**Questions**"). Save where otherwise appears, the facts deposed hereto are within my personal knowledge or are derived from office files and records and sources to which I have access and are true to the best of my knowledge, information and belief. Save as otherwise specified, this Witness Statement adopts the same abbreviations and nomenclature as in the 23 December Letter.

6. This Witness Statement addresses Question 2.1, Questions 5.1 and 5.2 by considering the factors and circumstances in Question 6 of the 23 December Letter. Other Questions which are within FSD's purview will be addressed in the witness statements of other relevant officers of FSD to the Committee. I understand that FSD will produce to the Committee a List of Documents ("**LoD**"), a draft of which I have read, indexing all relevant documents in FSD's possession. In this Witness Statement, I shall refer to these documents by their designation in the LoD (for example, **[FSD/A(I)/1]** means Items 1 in Part A(1) of the LoD) without annexing them hereto for the avoidance of duplication.

7. This Witness Statement is divided into the following parts:-

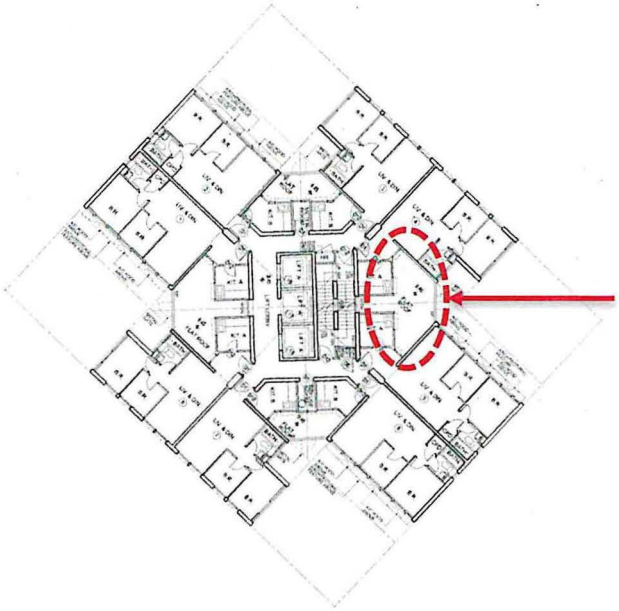
7.1. **Part A** provides description and explanation on (i) the origin of the fire and the subsequent spread within Wang Fuk Court in answer to **Question 2.1** and (ii) the cause of the fire in answer to **Question 5.1**;

7.2. **Part B** provides description and explanation on the reasons why the fire had spread extensively, at such a rapid speed and lasted for so long in answer to **Question 5.1**; and

7.3. **Part C** provides description and explanation on the cause of the heavy casualties at Wang Fuk Court, including the cause of deaths and injuries in answer to **Question 5.2** by reference to the factors and circumstances in **Question 6**.

Part A (i) The Origin of the Fire and Subsequent Spread within Wang Fuk Court

8. Based on information and video provided by witnesses, the fire is believed to have originated from the flat roof outside Rooms 104 and 105 of Wang Cheong House. This finding is supported by subsequent on-site inspections by IFITF and the assessment of circumstantial evidence.



Layout showing the believed fire origin

[FSD/D(I)/5]

Incipient stage of the fire on the flat roof outside Rooms 104 and 105 of Wang Cheong House

9. The spread of the fire will be explained in detail in Part B: Reasons why the fire had spread extensively, at such a rapid speed and lasted for so long.

Part A (ii) Cause of the Fire

10. For the reasons that neither trace of accelerants nor suspicious activity immediately before the occurrence of the fire could be noted at scene, the Hong Kong Police Force (HKPF) reported that arson has been ruled out preliminarily as a probable cause of fire.

11. Hence, IFITF investigations focused on accidental factors, specifically identifying the first fuel ignited and the competent ignition source:

12. **Possible First Fuel Ignited**

12.1. The Electrical and Mechanical Services Department ("**EMSD**") inspected the LPG piping and fittings located on the flat roof in question on 4 December 2025. Subsequently, EMSD verbally reported to IFITF that the inspection results had ruled out LPG gas leakage as the initial fuel source, with written confirmation pending.

12.2. Subsequent excavation around the suspected fire origin at Wang Cheong House uncovered various items, including cigarette ends, renovation tools, polystyrene boards, and carton paper boxes containing paper-faced mosaic tiles. These findings suggested that the substantial amount of combustible materials placed in the area could serve as fuel for the fire. [FSD/D(II)/1-4]

12.3. The same was observed at Wang Chi House (the only undamaged block throughout Wang Fuk Court) where cigarette ends, carton boxes, and polystyrene boards were found on the flat roof and working platforms on the first floor.

12.4. Among these materials, paper-based items (such as carton paper boxes and backing papers of mosaic tiles) found at the believed fire origin were known to be susceptible to smoldering fire[1] when in contact with a glowing source[2].

13. Competent Ignition Source

13.1. In determining the competent ignition source, the following possibilities were considered:

i. Electrical Fault
EMSD verbally reported that electrical faults from the building's electricity supply as a potential cause of the fire had been ruled out due to the lack of electrical appliances, sockets or electrical wires at the believed fire origin, pending written confirmation.

ii. Spontaneous Combustion[3]
No materials prone to spontaneous combustion were identified in the vicinity; therefore, this cause was deemed unlikely.

iii. Flying Embers or External Factors

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[1] *Unlike flaming combustion which produces visible flames, smoldering fire occurs when materials burn slowly without enough oxygen to sustain a flame. A smoldering fire can persist unnoticed for hours or even days, and may later reignite into open flames when conditions are favorable.*

[2] *Common glowing sources include, but are not limited to, lit cigarettes, overheated electrical components, metalwork sparks, incense sticks and other flying ember.*

[3] *Spontaneous combustion refers to the process by which a material catches fire without an external ignition source.*

The investigation confirmed that mosaic tile installation was underway. Such procedure did not involve any type of hot works and therefore hot works, such as welding, were ruled out as potential causes.

iv. Disposal of Lighted Smoking Materials
Two cigarette ends were found at the believed fire origin. Additionally, numerous cigarette ends were discovered at the bamboo scaffolding worksite at Wang Chi House, indicating that smoking and the improper disposal of cigarette ends were not uncommon acts in these areas.

13.2. Based on the above analysis, the incident was most likely accidental in nature, initiated by a glowing source (such as a lit cigarette end) igniting combustible materials (like carton paper boxes). A detailed analysis could also be found in the Statement from Dr. LEE Wing-man of Government Laboratory on 29.12.2025. [FSD/C(II)/1]

Part B Reasons why the fire had spread extensively, at such a rapid speed and lasted for so long

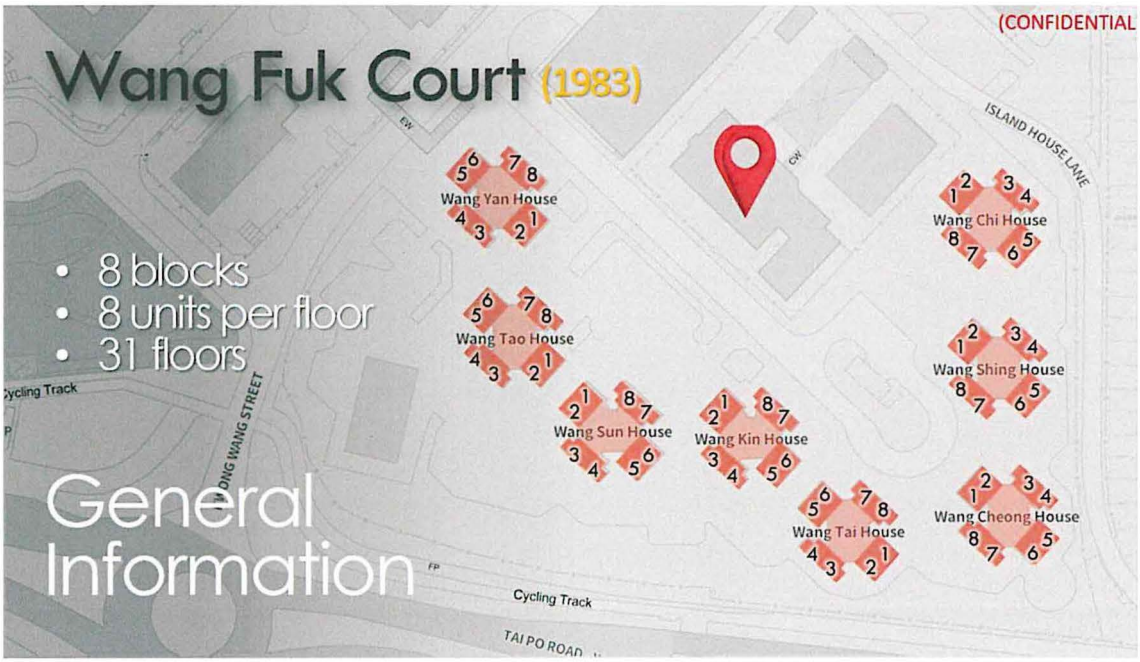
14. Although the fire at Wang Cheong House was reported by the caller at approximately 14:51, CCTV footage[4] shows embers falling onto the building's bicycle parking area[5] at approximately 14:44, indicating that the fire had started earlier. [FSD/D(I)/1]

15. Observations from frontline members suggested that the fire spread from Wang Cheong House to other buildings in the sequence as shown in the following table. A general layout of Wang Fuk Court is also shown below the table for reference.

	Building	Time of Spread
1.	Wang Tai House	15:00 hrs
2.	Wang Shing House	15:20 hrs
3.	Wang Kin House	15:25 hrs
4.	Wang Sun House	15:25 hrs

[4] *Playtime of the video 00:44:00 – 00:44:48.*
[5] *The bicycle parking area is located on the G/F level below Room 104.*

5.	Wang Tao House	15:39 hrs
6.	Wang Yan House	16:04 hrs



Layout Plan of Wang Fuk Court

16. The fire was eventually counted as "surrounded" at 2131 hours on 27.11.2025 and "under control" at 0315 hours on 28.11.2025.

17. The extensive and rapid spread, as well as prolonged duration of the fire were driven by a combination of factors, including:

(i) Unfavorable weather conditions accelerating fire spread;

(ii) Rapid vertical fire spread through chimney-like re-entrant;

(iii) Secondary ignitions by embers, fire droplets and falling debris;

(iv) Combustible building envelope contributing to fire propagation; and

(v) Fire load inside units prolonging fire duration.

These factors interacted and amplified one another, creating conditions ideal for fire development.

18. **Unfavorable weather conditions accelerating fire spread**

18.1. Dry and windy conditions created an ideal environment for the fire to spread and for embers to spark additional fires.

18.2. On the day of the fire, the Hong Kong Observatory ("**HKO**") issued a Red Fire Danger Warning [6], with relative humidity levels measured 40% to 50% between 1500 and 1800 hours. These low humidity levels reduced the moisture content in materials, rendering them more prone to combustion and more conducive to fire spread. The dry atmosphere also facilitated the development of smoldering fires, which would go unnoticed at first, but reignited at a later stage which in turn further contributed to the fire's extensive spread.

18.3. Winds [7] further accelerated the fire's progression by carrying embers—burning fragments of construction materials—over considerable distances. These embers ignited combustible materials such as safety nets, construction debris, and other items on nearby buildings and structures. The winds also supplied additional oxygen to the flames, intensified the fire's heat and caused the fires to grow more quickly and uncontrollably. [FSD/G(III)/10]

19. **Rapid vertical fire spread via chimney-like re-entrant filled with combustibles**

19.1. The fire was believed to have originated from the flat roof of Wang Cheong House and quickly spread upward through the re-entrant. Although the re-entrant was partially open on one side, it acted in a way similar to a "chimney", trapping hot air, flames and flammable gases as well as allowing them to rise rapidly.

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[6] *The Fire Danger Warning System aims at alerting the public to conditions in which fires may start and spread easily. The chance of fire outbreaks when fire danger warnings are issued is much higher than the average. The Red Fire Danger Warning will be issued when the fire risk is extreme. The issuance of warnings is based on: (a) weather conditions favouring the occurrence and spread of fires, such as low humidity and high wind speed; and (b) information on the dryness of vegetation supplied by the Agriculture, Fisheries and Conservation Department.*

[7] *An east to southeast wind, at approximately 14 km/h, was recorded by HKO at 1500 hrs that day.*

19.2. Combustible materials within the re-entrant, such as bamboo scaffolding, safety nets, and polystyrene window covers, provided a continuous fuel source, sustaining the fire's progression.

19.3. Winds blowing into the re-entrant further intensified the fire by supplying abundant oxygen, accelerating the upward spread.

[FSD/D(I)/4]]

Rapid vertical fire spread observed at Wang Cheong House

19.4. It was observed that the re-entrant, acting like a "chimney," facilitated the rapid upward fire spread, engulfing multiple floors in a very short time.

19.5. Cable TV footages provided a clear view of the fire spreading through the re-entrant of Wang Tao House, showing evidence that the rapid vertical fire spread was likely caused by the ignition of pyrolyzed gases[8], generated from the pyrolysis of combustible

[8] *Pyrolysis is the thermal decomposition of a material caused by high temperatures. This process breaks down the material's structure, releasing gases as by-products and leaving behind char, a carbon-rich solid residue. These gases, known as pyrolyzed gases, are often highly flammable and can ignite when mixed with the right amount of air and exposed to a heat source.*

materials (such as bamboo scaffolding, safety nets, and polystyrene window covers as mentioned in para. 19.2), which had accumulated within the re-entrant.

[FSD/D(I)/6]

The re-entrant of Wang Tao House remain unaffected in 16:00[9]

[FSD/D(I)/6]

Flying Embers was spreading from Wang Sun House[10]

[FSD/D(I)/6]

Pyrolyzed gases from combustibles accumulated in the re-entrant[11]

[9] *Playtime of the video 00:11:17.*
[10] *Playtime of the video 00:13:13.*
[11] *Playtime of the video 00:20:40.*

[FSD/D(I)/6]

Flaming fire observed in the lower portion[12]

[FSD/D(I)/6]

Fire spread vertically throughout the building[13]

20. **Secondary ignitions by embers, fire droplets and falling debris**

20.1. Winds carried embers—small, burning fragments of combustibles— to nearby structures, where they ignited safety nets, construction debris, and other combustible materials. These embers were particularly dangerous because they could travel a significant distance and land on exposed surfaces far away from the original fire and in turn starting new fires.

[12] *Playtime of the video 00:21:25.*
[13] *Playtime of the video 00:21:51.*

[FSD/D(I)/2]

[FSD/D(I)/2]

Flying embers suspected spreading from Wang Cheong House to Wang Tai House[14]

20.2. In addition to wind-transported embers, burning safety nets melted and dripped as fire droplets onto lower floors, potentially serving as an ignition source for other combustible materials. Besides, falling debris also contributed to the fire spread by igniting lower floors and ground-level areas.

[FSD/D(I)/8]

Falling fragments of burning scaffolding nets contributing to fire spread

[14] *Playtime of the video 00:37:22 and 01:24:11.*

20.3. The combination of low humidity and strong winds facilitated the rapid spread of fire as wind-transported embers, dripping fire droplets and falling debris continued to spark new fires in surrounding areas. These could result in immediate visible flames or cause smoldering fires—slow-burning, low-temperature fires that often remain undetected. Such smoldering fires posed a hidden danger, as they could go unnoticed for hours or even days before reigniting into open flames when conditions became favorable.

21. Combustible building envelope contributing to fire propagation

21.1. The buildings in Wang Fuk Court were undergoing major renovation at the time of the fire, which led to their external walls being surrounded by combustible construction materials. These materials included bamboo scaffolding, safety nets, polystyrene window covers, plastic skirting boards (toe-boards), canvas, wooden planks, etc. Together, these materials created a combustible "envelope" enclosing the buildings and provided an abundant fuel source for the fire. [FSD/D(II)/6-10]

21.2. The impact of this combustible envelope was further intensified within the re-entrant. In this partially open space, the accumulation of heat and flammable gases, combined with the abundance of combustible materials, allowed the fire to spread upward rapidly.

22. Fire load inside units prolonging fire duration

22.1. The fire spread from the building's exterior into interior primarily through broken or open windows. Once the fire spread inside domestic units, it encountered a vast array of combustible materials, including furniture, curtains, bedding, clothing, paper, plastics, and electronic appliances. These materials provided abundant fuel sources, allowing the fire to grow rapidly and sustain itself for an extended period.

22.2. The enclosed nature of the domestic units further intensified the fire. As more items ignited, the temperature within the units rose, causing additional materials therein to reach their ignition point. This chain reaction accelerated the fire development, enabling it to engulf the entire unit.

23. Meanwhile, as to whether renovation of all 8 blocks being carried out at the same time was a contributing factor to (i) the extensive and rapid spread of the fire, as well as its prolonged duration, and (ii) the heavy casualties at Wang Fuk Court, the information currently available to me is not sufficient for such suggestion to be made.

Part C The cause of the heavy casualties at Wang Fuk Court, including the cause of deaths and injuries

24. The high number of casualties in the Wang Fuk Court fire can be attributed to the following factors.

25. **Rapid Fire Spread**

25.1. Video recordings evidenced that flames quickly spread from the lower levels to the rooftop. This extreme rate of vertical fire spread left residents with limited time to react, significantly reducing opportunities for safe evacuation and increasing the likelihood of entrapment.

25.2. The rapid spread of the fire was exacerbated by the presence of a combustible building envelope as well as unfavorable weather conditions such as strong winds and low humidity, as previously discussed.

26. **Burning Debris and Bamboo Scaffolding**

26.1. Flaming bamboo scaffolding and other construction materials detached from the upper levels during the fire led to a large amount of burning debris being accumulated at ground level, creating fiery

obstructions that blocked building entrances at the initial stage of the fire. As a result, both escape for evacuees and access for firefighting personnel were obstructed, thus delaying escape, rescue efforts and fire suppression at the material time.

27. **Compromised Tenability in Means of Escape**

27.1. During the fire, the openable windows in the common corridors on each floor, as well as in the staircases on some floors, when opened, allowed smoke from the burning of combustible materials on the external scaffolding to enter the corridors and hinder evacuation.

[FSD/D(I)/7]

Video footage showing smoke entering corridors through openable windows

28. **Smoke Infiltration into Escape Staircases**

28.1. Some of the windows at the escape staircases were replaced with wooden doors to allow workers' access to the exterior.

[FSD/D(II)/5]

Windows replaced by wooden door (damaged by fire) at escape staircase of 10-11/F on Wang Tai House

28.2. During the fire, these wooden doors allowed smoke and heat to infiltrate the staircases. The above photo showed that there was severe blackening of the ceiling above the door, likely caused by heavy smoke poured into the staircase.

28.3. As a result, the escape staircases, meant to be protected routes for evacuation, were filled with smoke, leaving residents without a safe pathway to escape. This not only endangered the lives of residents but also posed additional challenges to firefighting efforts, as the compromised staircases restricted access for firefighters, delayed our operations and reduced the effectiveness of firefighting efforts.

29. **Polystyrene Window Covers on Units**

29.1. Polystyrene window covers, installed on unit windows, obstructed residents' visibility of the external. This hindered occupants from realizing the severity of the fire in neighboring buildings, lowering their awareness and in turn delaying their response.

29.2. In addition, the combustible polystyrene panels contributed to the vertical spread of the fire and increased the likelihood of windows shattering. Once windows were breached, flames and smoke entered units easily and directly exposing residents to dangerous conditions, not to mention the combustion of such polystyrene materials will generate toxic gases such as Carbon Monoxide.

30. **Failure of Fire Alarms**

30.1. There is information showing that fire alarm systems failed to actuate in seven of the eight blocks at Wang Fuk Court during the fire. This failure delayed the alerting of residents, reducing the time available for safe evacuation.

31. I confirm that the contents of this Witness Statement are true to the best of my knowledge, information and belief.

Dated this 16th day of January 2026.

TO Chi-wing
Divisional Commander (Airport)
Fire Services Department